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| APPLICATION NO.       | FILING DATE                       | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.     | CONFIRMATION NO. |  |
|-----------------------|-----------------------------------|----------------------|-------------------------|------------------|--|
| 10/757,495 01/15/2004 |                                   | Jin-Hwi Jun          | 46023                   | 4628             |  |
| 1609                  | 7590 11/14/2005                   |                      | EXAMINER                |                  |  |
|                       | CE, ABRAMS, BERDO<br>STREET, N.W. | HUFFMAN, JULIAN D    |                         |                  |  |
| SUITE 600             | SIREEI, N.W.                      | ART UNIT             | PAPER NUMBER            |                  |  |
| WASHINGTON,, DC 20036 |                                   |                      | 2853                    |                  |  |
|                       |                                   |                      | DATE MAILED: 11/14/2005 |                  |  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|  |   | Application  | on No.  | Applicant(s)   |        |  |  |  |
|--|---|--|---|--|--------|--|--|--|
| Office Action Summary  |   | 10/757,49  | 95  | JUN, JIN-HWI   |        |  |  |  |
|  |   | Examiner   | ,   | Art Unit   |        |  |  |  |
|  |   | Julian D. I  | Huffman   | 2853   |        |  |  |  |
| Period fo  | The MAILING DATE of this commun<br>or Reply   | nication appears on the  | cover sheet with the c  | orrespondence ad   | ldress |  |  |  |
| WHIC<br>- Exter<br>after<br>- If NO<br>- Failu<br>Any r  | ORTENED STATUTORY PERIOD FOR HEVER IS LONGER, FROM THE MASSIGN OF | MAILING DATE OF TH<br>s of 37 CFR 1.136(a). In no even<br>munication.<br>tatutory period will apply and w<br>y will, by statute, cause the app | HIS COMMUNICATION ent, however, may a reply be timed to some six (6) MONTHS from the lication to become ABANDONEI | I. ely filed the mailing date of this c O (35 U.S.C. § 133). |        |  |  |  |
| Status   | •   |  |   |  |        |  |  |  |
| 1)   | Responsive to communication(s) file   | ed on  |   |  |        |  |  |  |
| 2a)  | This action is FINAL. 2b) This action is non-final.   |  |   |  |        |  |  |  |
| 3) 🗌   | Since this application is in condition for allowance except for formal matters, prosecution as to the ments is  |  |   |  |        |  |  |  |
|  | closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.   |  |   |  |        |  |  |  |
| Dispositi  | on of Claims  |  |   |  |        |  |  |  |
| 4) 🖂   | 4) Claim(s) 1-10 is/are pending in the application.   |  |   |  |        |  |  |  |
|  | 4a) Of the above claim(s) is/are withdrawn from consideration.  |  |   |  |        |  |  |  |
|  | 5) Claim(s) is/are allowed.   |  |   |  |        |  |  |  |
| ·  | Claim(s) is/are rejected.   |  |   |  |        |  |  |  |
| •  | Claim(s) <u>1-10</u> is/are objected to.  |  |   |  |        |  |  |  |
| 8) Claim(s) are subject to restriction and/or election requirement.  |   |  |   |  |        |  |  |  |
| Applicati  | on Papers   |  |   |  |        |  |  |  |
| 7—   | The specification is objected to by the   |  |   |  |        |  |  |  |
| 10)⊠ The drawing(s) filed on <u>15 January 2004</u> is/are: a)⊠ accepted or b)⊡ objected to by the Examiner.                     |   |  |   |  |        |  |  |  |
| Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).                          |   |  |   |  |        |  |  |  |
| Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).         |   |  |   |  |        |  |  |  |
| 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.                     |   |  |   |  |        |  |  |  |
| Priority (   | ınder 35 U.S.C. § 119   |  |   |  |        |  |  |  |
| 12)⊠ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a)⊠ All b)□ Some * c)□ None of: |   |  |   |  |        |  |  |  |
|  | 1. Certified copies of the priority documents have been received.   |  |   |  |        |  |  |  |
|  | 2. Certified copies of the priority documents have been received in Application No  |  |   |  |        |  |  |  |
|  | 3. Copies of the certified copies of the priority documents have been received in this National Stage   |  |   |  |        |  |  |  |
| application from the International Bureau (PCT Rule 17.2(a)).  |   |  |   |  |        |  |  |  |
| * See the attached detailed Office action for a list of the certified copies not received.                                       |   |  |   |  |        |  |  |  |
|  |   |  |   |  |        |  |  |  |
| Attach   | Ma)   |  |   |  |        |  |  |  |
| Attachmen  1) Notice   | t(s)<br>e of References Cited (PTO-892)   |  | 4) Interview Summary  | (PTO-413)  |        |  |  |  |
| 2) Notic   | e of Draftsperson's Patent Drawing Review (   |  | Paper No(s)/Mail Da   | ate  | 0.152) |  |  |  |
|  | nation Disclosure Statement(s) (PTO-1449 o<br>r No(s)/Mail Date <u>6/8/05</u> .   | r PTO/SB/08)   | 5)  Notice of Informal P 6)  Other:   | atent Application (PT  | U-192J |  |  |  |

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### **DETAILED ACTION**

## Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

## Claim Objections

2. Claims 1-10 are objected to because of the following informalities:

In claims 1 and 6, the limitation "the same edge" found in the second to last line lacks antecedent basis.

Appropriate correction is required.

### Conclusion

3. The examiner contacted applicant's representatives on 7 October 2005 and on occasions thereafter, and discussed an examiner's amendment to correct the above.

The examiner has awaited response from applicant, however, applicant presently has not provided approval for an examiner's amendment.

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4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. 5,331,680 to Ueno solves a similar problem of correcting a variation in detection of a slit of an encoder arising during bi-directional movement. As shown in fig. 5, the detection timing of the slit during movement in a forward direction is offset from that of the backward direction. During movement in the forward direction, a signal is output upon detection of the left edge of the slit, while during movement in the backward direction, a signal is output upon detection of the right edge of the slit. A positioning error thus occurs, the error being equal to the width of the slit and arising from detection of the different edges of the slit.

A position correcting section corrects this error by correcting an encoder count amount when the direction of movement changes.

Applicant's invention on the other hand, detects the same edge of the slit regardless of the travel direction of the carriage.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (571) 272-2147. The examiner can normally be reached on 10:00a.m.-6:30p.m. Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Julian D. Huffman 10 November 2005